

## **A Filter for Digitally Processing an Analog Input Signal with Analog Feedback**

### **ABSTRACT**

A filter is described for digitally processing an analog input signal with analog feedback. In one example, the filter uses a topology similar to a second order universal filter block and includes a signal combiner for producing an analog output signal based upon an analog input signal and one or more analog feedback signals. An analog to digital converter processes the analog output signal into a digital data stream which is digitally processed to produce one or more digital output signals which are converted to one or more analog feedback signals. The digital processing can include a bandpass transfer function and a lowpass transfer function. The filter may be implemented in mixed-signal CMOS using standard CMOS processing techniques

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